

AMENDMENTS TO THE CLAIMS

Claims 1-5 Cancelled

6. (Currently amended) In an impulse radio, a method of rake receiving, comprising:
receiving a plurality of reflections of an impulse radio signal ~~reflections~~ at a
corresponding plurality of rake teeth;
sampling said plurality of ~~impulse radio signal~~ reflections to produce a plurality of
samples; and
determining at least one figure of merit for one or more of said plurality of ~~impulse radio~~
~~signal~~ reflections dynamically, ~~wherein each of said at least one figure of merit being determined~~
~~solely from~~ based upon said plurality of samples without considering an expected impulse radio
characteristic determined during a rake training period ~~the corresponding one of said plurality of~~
~~impulse radio reflections.~~
7. (Previously presented) The method of claim 6, further comprising:
performing a data demodulation computation based upon the samples and the at
least one figure of merit.
8. (Currently amended) The method of claim 7, wherein the samples corresponding to at
least one of said plurality of ~~impulse radio signal~~ reflections are excluded during the data
demodulation computation.
9. (Currently amended) The method of claim 8, wherein the samples corresponding to at
least one of said plurality of ~~impulse radio signal~~ reflections are excluded based on at least one of
said at least one figure of merit.

10. (Previously presented) The method of claim 7, wherein at least one of the at least one figure of merit is updated.
11. (Previously presented) The method of claim 10, wherein the data demodulation computation is based upon an updated one of the at least one figure of merit.
12. (Currently amended) The method of claim 6, wherein a time offset of at least one rake tooth of said plurality of rake teeth is confined to a corresponding at least one rake tooth placement zone.
13. (Currently amended) The method of claim 12, wherein the at least one rake tooth placement zone corresponding to said at least one rake tooth is adjusted based upon said at least one figure of merit corresponding to said at least one rake tooth.
14. (Previously presented) The method of claim 6, wherein at least one time offset is placed to maximize the energy captured by said at least one rake tooth.
15. (Currently Amended) The method of claim 14, wherein the at least one time offset is determined ~~solely~~ dynamically based on samples of said plurality of impulse radio signal reflections at a corresponding one of said at least one rake tooth.
16. (Previously presented) The method of claim 14, wherein time offsets for two or more of said plurality of rake teeth are determined in parallel.
17. (Currently amended) The method of claim 6, wherein the at least one figure of merit is determined based upon the variance of the samples of said plurality of ~~impulse radio signal~~

reflections at a corresponding one of said plurality of rake teeth.

18. (Currently amended) The method of claim 6, wherein the at least one figure of merit comprises an approximation of the variance of the samples of said plurality of ~~impulse radio signal~~ reflections at a corresponding one of said plurality of rake teeth.

19. (Currently amended) An impulse radio receiver, comprising:
sampling circuitry that samples a plurality of reflections of an impulse radio signal ~~reflections~~ at a plurality of rake teeth to produce a plurality of samples; and
figure of merit determination circuitry that dynamically determines at least one figure of merit ~~for one or more of said plurality of impulse radio signal reflections~~ based solely on the plurality of samples without considering an expected impulse radio signal characteristic determined during a rake training period of the corresponding one of said plurality of impulse radio signal reflections.

20. (Currently amended) The impulse radio receiver of claim 19, further comprising:
demodulation computation circuitry that demodulates ~~d~~ data based upon the samples and the at least one figure of merit.

21. (Currently amended) The impulse radio receiver of claim 20, wherein the samples corresponding to at least one of said plurality of ~~impulse radio signal~~ reflections are excluded during data demodulation.

22. (Currently amended) The impulse radio receiver of claim 21, wherein the samples corresponding to at least one of said plurality of ~~impulse radio signal~~ reflections are excluded based on at least one of said at least one figure of merit.

23. (Previously presented) The impulse radio receiver of claim 21, wherein at least one of the at least one figure of merit is updated.

24. (Previously presented) The impulse radio receiver of claim 23, wherein the data demodulation is based upon an updated one of the at least one figure of merit.

25. (Currently amended) The impulse radio receiver of claim 19, wherein a time offset of at least one rake tooth of said plurality of rake teeth is confined to a corresponding at least one rake tooth placement zone.

26. (Currently amended) The impulse radio receiver of claim 25, wherein the at least one rake tooth placement zone corresponding to said at least one rake tooth is adjusted based upon said at least one figure of merit corresponding to said at least one rake tooth.

27. (Previously presented) The impulse radio receiver of claim 19, wherein at least one time offset is placed to maximize the energy captured by said at least one rake tooth.

28. (Currently amended) The impulse radio receiver of claim 27, wherein the at least one time offset is determined ~~solely~~ dynamically based on samples of said plurality of ~~impulse radio signal~~ reflections at a corresponding one of said at least one rake tooth.

29. (Previously presented) The impulse radio receiver of claim 27, wherein time offsets for two or more of said plurality of rake teeth are determined in parallel.

30. (Currently amended) The impulse radio receiver of claim 19, wherein the at least one

figure of merit is determined based upon the variance of the samples of said plurality of ~~impulse radio-signal~~ reflections at a corresponding one of said plurality of rake teeth.

31. (Currently amended) The impulse radio receiver of claim 19, wherein the at least one figure of merit comprises an approximation of the variance of the samples of said plurality of ~~impulse radio-signal~~ reflections at a corresponding one of said plurality of rake teeth.

32. (Currently amended) A method of rake receiving in an impulse radio, comprising receiving a plurality of reflections of an impulse radio signal ~~reflections~~ at a plurality of rake teeth;

sampling said plurality of impulse radio signal reflections to produce a plurality of samples;

determining a plurality of figures of merit corresponding to the plurality of rake teeth, each one of said plurality of figures of merit being determined solely dynamically based upon said plurality of ~~from~~ samples without considering an expected impulse radio signal characteristic determined during a rake training period of the corresponding one of said plurality of impulse radio-signal reflections;

determining a best figure of merit of said plurality of figures of merit; and

determining whether to exclude at least one of said plurality of rake teeth from a demodulation computation based upon a comparison of its corresponding one of said plurality of figures of merit to the best figure of merit.

33. (Previously presented) The method of claim 32, further comprising:

performing a demodulation computation based upon samples of those of said plurality of rake teeth that are not excluded.